UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,361	01/08/2001	Mathieu Tallegas	40032/JEJ/X2	6623

35114   7590   12/28/2004

ALCATEL INTERNETWORKING, INC.
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EXAMINER
NG, CHRISTINE Y

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _12 October 2004_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,4,18-26,33 and 36_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☒ Claim(s) _1,4,18-26,33 and 36_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _08 January 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some *   c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _7/29/04_.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1, 18, 19, 20, 21, 23, 25 and 33 are rejected under 35 U.S.C. 103(a) as

being unpatentable over U.S. Patent No. 6,636,480 to Walia et al in view of U.S. Patent

No. 6,542,508 to Lin.

Referring to claims 1 and 33, Walia et al disclose in Figure 7 a packet switching

controller comprising:

An input (Flow Classifier 704) for receiving a packet. The flow classifier 704

"takes incoming packets and classifies the packets by flow" (Column 9, lines 3-4).

A policing element (Flow Classifier 704 and Rule Selector 706) for classifying the

packet into a plurality of policeable groups (Traffic Control Units 708-722). After the

flow classifier 704 classifies a flow, the rule selector 706 "maps a flow to a particular

traffic control rule or chain of traffic control rules"; the traffic control rules (TCR) are

implemented by the traffic control units 708-722. Refer to Column 9, lines 4-20.

Wherein the packet is compared against one or more bandwidth contracts

(maximum allowable bandwidth) defined for the policeable groups (Traffic Control Units

708-722) to produce one or more policing results. The traffic control units 708-722

"regulate the flows according to the bandwidth limits of the respective traffic control

rule". Refer to Column 9, lines 21-34. Refer to Figures 4-6 for examples.

[Figure 3] A first policeable group identifier ("from Src A to Dest B") to retrieve

first policing data (TCR1; maximum allowed bandwidth = 10 Mb/s) and a second

policeable group identifier ("Type X"). Flows (A) of Type X and from source A to

destination B are limited to 10Mb/s of bandwidth. Refer to Column 4, lines 26-40.

Producing a first policing result using the first policing data (TCR1; maximum

allowed bandwidth = 10 Mb/s). If the TCR1 is not violated by flow A, the packet is

mapped to the next rule. If the TCR1 is violated by flow A and the packet A is not

dropped, the packet is also mapped to the next rule. Refer to Column 6, lines 1-9.

Applying the second policeable group identifier ("Type X") to retrieve second

policing data (TCR3; maximum allowed bandwidth = 20 Mb/s). Flows of Type X,

regardless of source and destination, are limited to 20 Mb/s. Refer to Column 4, lines

41-46.

Producing a second policing result using the second policing data (TCR3;

maximum allowed bandwidth = 20 Mb/s). Data packet A is next applied to TCR3 to

determine whether it is to be forwarded or dropped. Refer to Column 6, lines 49-53.

[Figure 4] A disposition engine for making a disposition decision for the packet,

wherein the policing results include one or more disposition recommendations (from

TCR1, Step 406 and TCR3, Step 412), and using the policing results and at least one

other disposition recommendation to make a disposition decision for the packet. If the

TCR1 was not violated by data packet A or if data packet A violated TCR1 but was not

dropped, the final disposition of data packet A is determined by mapping it to TCR3 to determine final disposition recommendation. Refer to Column 5, line 53 to Column 6, line 9.

Walia et al do not disclose that the policing information is stored in a database.

Lin discloses in Figure 3 that information for traffic policing is stored in a policy database 202. In a network, the policy-based application examines every packet coming in the network and "compares it against flow classification criteria, and performs the necessary actions based upon the policies defined in a policy database" (Column 1, lines 29-31). The policy database, accessible to policy-based applications, stores policies defined by network managers to describe network traffic behaviors, specifically: what traffic is to be to controlled (flow classification 203a) and how the traffic is to be controlled (action specification 203b). Refer to Column 3, lines 26-34. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the policing information is stored in a database, the motivation being so that network managers can specify what traffic is to be controlled and how the traffic is to be controlled and make the information accessible to all applications; thereby facilitating traffic control in a network.

Referring to claim 18, refer to the rejection of claims 1 and 33.

Referring to claim 19, Walia et al disclose that a particular policeable group (TCR) identifies a type of application to be policied. In Figure 3, TCR1 polices flows of Type X, from Src A to Dest B; TCR2 polices flows of Type X, from Src C to Dest D; and

TCR3 polices flows of Type X. Refer to Column 4, lines 26-44. Refer to Figures 5 and 6 for other examples of TCRs policing only specific groups of flows.

Referring to claim 20, Walia et al disclose that the policing data (maximum allowed bandwidth) includes information on bandwidth constraints specified for at least one policeable group (TCR). Refer to Figure 3 where each TCR 302, 304 and 306 have an maximum allowed bandwidth of 10Mb/s, 15 Mb/s and 20 Mb/s, respectively.

Referring to claim 21, Walia et al disclose that the policing results indicate whether the data packet is to be forwarded. "If traffic control rule 3 is not violated by a flow A packet, then the flow A packet is forwarded to a next location" (Column 6, lines 49-51).

Referring to claim 23, Walia et al disclose that the policing results indicate whether the data packet is to be dropped. "If traffic control rule 3 is violated by a flow A packet, then the appropriate violated action is taken" which includes "dropping the packet" (Column 6, lines 51-54).

Referring to claim 25, Walia et al disclose that the step of recommending a disposition comprises selecting either the first or second policing result as the recommended disposition. If the disposition of TCR1 for data packet A is not selected as the recommended disposition (data packet A violated TCR1 but was not dropped), it may also need to be regulated by further traffic control rules (TCR3) for the final disposition. Refer to Column 6, lines 1-9. Furthermore, a flow may be mapped to any number of traffic control rules. Refer to Column 5, lines 46-52.

3.   Claims 4 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent No. 6,636,480 to Walia et al in view of U.S. Patent No. 6,452,933 to Duffield

et al.

Walia et al do not disclose that the policing results are combined into a single

result by taking a worst case policing result.

Duffield et al discloses that in order to determine which queue in a connection to

service first, worst case fairness is implemented. The time interval between a packet

serviced at a first time and a packet serviced at a second time must be less than a value

determined by the packet size of the longest queue; the longest queue will experience

the longest end-to-end delay. This will ensure that the servicing of the queues will be

admitted even in during the longest possible delay. Refer to Column 5, lines 35-45.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to include that the policing results are combined into a single result

by taken a worst case policing result, the motivation being that by taking in the worst

case result, it will ensure that all other policing results will be satisfied even in during

delay.

4.   Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 6,636,480 to Walia et al in view of U.S. Patent No. 5,339,332 to Kammerl.

Walia et al do not disclose that the policing results indicate whether the data

packet is eligible to be dropped.

Kammerl discloses that in an ATM system, when the negotiated bit rate of

connection is exceeded, the excess ATM cells are eliminated. However, it is also

"possible to mark the excess ATM cells such that they can still be subsequently

eliminated in the network as low-priority ATM cells in case traffic jams arise" (Column 1,

lines 61-64). Therefore, it would have been obvious to one of ordinary skill in the art at

the time the invention was made to include that that the policing results indicate whether

the data packet is eligible to be dropped, the motivation being that so that in case of

congestion, all excess packets that have not been dropped can be dropped; thereby

freeing more bandwidth for the necessary packets.

5.   Claims 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable

over U.S. Patent No. 6,636,480 to Walia et al in view of U.S. Patent No. 5,568,468 to

Ogasawara et al.

Referring to claim 24, Walia et al disclose that the step of recommending a

disposition comprises the step of combining the first and second policing results to

make a recommendation.

Ogasawara et al disclose in Figure 1 the step of recommending a disposition

comprises the step of combining the policing results (from Monitor Circuits 11a-11n) to

make a recommendation. Each of the monitor circuits 11a-11n "outputs a monitor result

representing whether the arriving cell violates the declared value of the traffic

parameter" (Column 7, lines 12-15) to the determination circuit 13. The determination

circuit 13 then determines whether to pass or discard the cell based on the combined

results of monitor circuits 11a-11n. Refer to Column 7, lines 12-36 and Column 8, lines

9-31. Therefore, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to include that the step of recommending a disposition

comprises the step of combining the policing results to make a recommendation, the

motivation being that when deciding whether to pass or discard a cell, many different

traffic parameters, such as peak cell rate or average cell rate, as measured by each of

the traffic monitors may be accounted for in determining the final disposition of the cell;

thereby ensuring a more complete traffic profile.

Referring to claim 26, Walia et al do not disclose the step of updating the policing

data based on the recommended disposition.

Ogasawara et al disclose in Figure 1 that based on the final determination result

of the packet, the determination circuit 13 determines whether to update the traffic

parameter (current traffic state) of the traffic parameter table 40. The monitor circuits

11a-11n determines whether or not an arriving cell violates a traffic parameter in

accordance with the permissible traffic value and the current traffic state read from the

traffic parameter table 40. Refer to Column 7, lines 12-36. Therefore, it would have

been obvious to one of ordinary skill in the art at the time the invention was made to

include the step of updating the policing data based on the recommended disposition,

the motivation being that the decision on the disposition of future cells depends on the

disposition of the current cell, since accepting or discarding a current cell can affect

traffic parameters such as cell rate and cell frequency.

Response to Arguments

6.   Applicant's arguments filed October 12, 2004 have been fully considered but they

are not persuasive.

7.   Referring to the argument for independent claims 1 and 33 (Page 7, lines 3-14),

although Walia et al discloses that "only one policing rule is applied to determine the

first disposition of the data packet, and under certain conditions, a second policing rule

is applied to determined a second disposition", Walia et al discloses that the in some

cases, the "violated action does not require dropping packets" so packets that "violate

the traffic control rule may also need to be regulated by traffic control rule 3" (Column 6,

lines 6-9). Therefore, as shown in Figure 4, if the violated action (steps 410,422) does

not require dropping packets, the first (step 406) and second (step 412) policing rule is

applied to all packets. At the end, only one disposition result (Figure 4, steps 426-432)

is made for the packet after passing through both the first (step 406) and second (step

412) policing rules.

Referring to the argument for independent claim 18 (Page 7, line 21 to Page 8,

line 8), refer to the argument for claims 1 and 33.

Conclusion

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

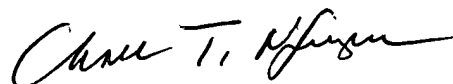extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng ᵕᴶ
December 16, 2004

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